

### Warm up before 10.2 Quiz

- (a)    STATE                      CHECK
- SRS                              - stated in problem
  - $n \geq 30$                         -  $n = 40 > 30$
  - $\text{pop} \geq 10n$                 - there are more than 400 Eagles games

(b)  $H_0: \mu = 225$

$H_a: \mu < 225$

$$t = \frac{221 - 225}{\frac{15.35}{\sqrt{40}}} = -1.648 \quad df = 39$$

$$P(t < -1.648) = 0.054$$

~~$t_{cdf}(-1.648, 39)$~~

We fail to reject  $H_0$  b/c p-value of  $0.054 > \alpha = 0.01$ .

We do not have sufficient evidence that the true average of fan arrests is less than 225.

(c) conditions checked previously

$$221 \pm (2.426)(15.35/\sqrt{40}) = (215.11, 226.89)$$

We are 98% confident that the true average fan arrests is between 215.11 and 226.89 arrests.